REMARKS

The Office Action dated October 3, 2003, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto. Claims 1, 3, 4, 6-13 are pending and have been examined. Claims 1, 7 and 9 have been amended to more particularly point out and claim the instant invention. No new matter has been added. Support for the current changes to claims 1, 7 and 9 can be found in the instant specification at page 7, line 7 to page 8, line 23. Applicants respectfully assert that current changes to the claims and the discussion that follows does not raise any new issues and entry of this Response after Final Rejection is earnestly requested. Claims 1, 3, 4, 6-13 are respectfully submitted for consideration.

Claims 1, 3, 4, 6-11 and 13 were rejected under 35 U.S.C. §102(e) as being allegedly anticipated by *Bernstein* (U.S. Patent No. 5,912,880). In addition, claim 12 was separately rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over *Bernstein* in view of *Pitio et al.* (U.S. Patent No. 5,834,980). In making the latter rejection, the Office Action took the position that *Bernstein* discloses many of the claimed elements of the invention with the exception of a phase detector, and that a polarity of the control signal is changed in accordance with the results of comparison, where *Pitio et al.* was cited for curing this deficiency. The above rejections, as might be applied against the instant claims, are respectfully traversed according to the remarks that follow.

The present invention, according to claim 1, is directed to a clock generating method for an asynchronous transmission. The method includes determining a plurality of actual signal arrival times for a number of samples, averaging the plurality of actual signal arrival times over the number of samples, correcting a timing of a receiving clock on a basis of an average of the plurality of actual signal arrival times and an expected signal arrival time, deriving an expected signal arrival time from the receiving clock and determining a frequency difference between a frequency corresponding to an average of the plurality of actual signal arrival times and a frequency of the receiving clock, and changing the frequency of the receiving clock according to the frequency difference. The number of samples is set such a time-dependent cell delay variation of actual signals being asynchronously transmitted has a mean value of zero.

The present invention, according to claim 7, is directed to a clock generating apparatus for asynchronous transmission. The apparatus includes means for determining an average of actual signal arrival times over a number of samples and for generating a control signal on a basis of a determined average of the actual signal arrival times and an expected signal arrival time and means for correcting a timing of a receiving clock on a basis of the control signal. The number of samples is set such a time-dependent cell delay variation of actual signals being asynchronously transmitted has a mean value of zero.

Applicants respectfully assert that the subject matter of the amended claims is novel, as well as being non-obvious, over the cited references, i.e., *Bernstein* and *Pitio et al.*

Bernstein is concerned with a system and method for ATM CBR timing recovery, as disclosed for example in Fig. 2 and corresponding description passages (column 2, line 57 to column 3, line 24). As derivable from the block circuit structure of Fig. 2 of *Bernstein*, a receiver's clock is corrected according to an average cell interarrival time. *Bernstein* details, at column 3, lines 48-51, that the "[c]ell counter 435 keeps track of the number of cells received. When cell counter 435 reaches a preset value, represented in FIG. 4 as N, counter 435 sends a completion signal to control circuit 410." Applicants note, however, that *Bernstein* is silent with respect to how or why the preset value is set.

Claim 1, as discussed above, recites, in part, that the number of samples is set such a time-dependent cell delay variation of actual signals being asynchronously transmitted has a mean value of zero. A similar element is also recited in claim 7. As discussed in the instant specification, cell delay variation is caused by propagation delays in the ATM network. N must be set based on characteristics of the network, as well as the desired accuracy, which, for example, may be 10,000 for speech being transmitted in the ATM network for a telephone call.

Bernstein discloses counting cells for a preset N, but *Bernstein* provides no appreciation for the rationale of setting any particular value of N. As such, *Bernstein* fails to teach or suggest setting the number of samples such that a time-dependent cell

delay variation of actual signals being asynchronously transmitted has a mean value of zero, as provided in independent claims 1 and 7. Therefore, Applicants respectfully assert that the rejection of those claims over *Bernstein* is improper for failing to teach or suggest all of the elements of those claims. Similarly, Applicants also assert that claims dependent on claims 1 and 7, namely claims 3, 4, 6 and 8-13, would also be allowable for at least their dependence on claims 1 and 7.

As discussed above, *Bernstein* is acknowledged in the Office Action as not teaching a phase detector and that a polarity of the control signal is changed in accordance with the results of comparison. While it is acknowledged that *Pitio et al.* was cited against claim 12 for curing these deficiencies of *Bernstein*, *Pitio et al.* fails to teach or suggest the elements of claim 7 that were missing from *Bernstein*. For this additional reason, Applicants respectfully assert that claim 12 should be allowed over the cited prior art.

To conclude, Applicants respectfully request the allowance of claims 1, 3, 4, 6-13 and request that the application be allowed to pass to issue. If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

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